Appl. No.: 10/673,935
Filed: 9/30/03
Amdt. dated 05/09/2006

Amendments to the Claims:

1-17. (Canceled)

18. (Amended) An isolated β-glucuronidase (GUS) protein encoded by a nucleic acid selected from the group consisting of:

~~(a) DNA having the nucleotide sequence given herein as SEQ ID NO:1;~~

(a ~~b~~) a polynucleotide that hybridizes ~~hybridize~~ to the complement of the nucleotide sequence of SEQ ID NO:1 ~~DNA of (a) above~~ under stringent conditions represented by a wash stringency of 50% formamide with 5x Denhardt's solution, 0.5% SDS and 1x SSPE at 42°C, and which encodes a β-glucuronidase (GUS) protein; and

(b~~e~~) a polynucleotide ~~polynucleotides~~ that differs ~~differ~~ from the nucleotide sequence of SEQ ID NO:1 ~~DNA of (a) or (b) above~~ due to the degeneracy of the genetic code, and which ~~encode~~ encodes the GUS protein ~~encoded by a DNA of (a) or (b) above~~.

19. (Original) An isolated GUS protein according to claim 18 having the amino acid sequence given herein as SEQ ID NO:2.

20. (Canceled)

21 (New) An isolated polypeptide encoded by a polynucleotide having at least 80% homology to the nucleotide sequence of SEQ ID NO:1, wherein said polypeptide has GUS activity.

22. (New) The isolated polypeptide of claim 21, wherein said polynucleotide comprises at least 90% homology to the nucleotide sequence of SEQ ID NO:1.

23. (New) The isolated polypeptide of claim 21, wherein said polypeptide is encoded by the nucleotide sequence SEQ ID NO:1.

24 (New) The isolated polypeptide of claim 21, wherein said polypeptide is encoded by a polynucleotide that differ from SEQ ID NO:1 by the degeneracy of the genetic code.

25. (New) The isolated polypeptide of claim 21, wherein said polypeptide has peak GUS activity at a pH of from 3 to 5 in 1.0 M sodium phosphate buffer using 1.0 mM PNPG substrate concentration.